

AMENDMENTS TO THE CLAIMS

Claims 1-15 (Previously Canceled).

Claims 16-30 (Canceled).

31. (New) A method for affixing mineral fillers on cellulose fibers in an aqueous suspension comprising providing a reaction medium of an aqueous suspension of cellulose fibers, said suspension being derived from a papermaking procedure and containing hydrogen carbonates, carbonates or silicates of alkali and/or earth alkali metals, and adding a hydroxide of a mineral filler to said reaction medium to precipitate carbonates or silicates of the mineral filler onto the fibers, and wherein the aqueous suspension of cellulose fibers includes sodium hydrogen carbonates.

32. (New) Method as claimed in claim 31, wherein the aqueous suspension of cellulose fibers includes calcium- and/or magnesium-hydrogen carbonates.

33. (New) Method as claimed in either claim 31 or 32, wherein a total alkalimetric titer of the aqueous suspension is between 2 and 30°F.

34. (New) Method as claimed in claim 31 wherein the aqueous suspension comprises between 20 and 1,000 ppm of sodium ions (Na^+).

35. (New) Method as claimed in claim 32, wherein the aqueous suspension contains between 5 and 200 ppm calcium ions (Ca^{2+}) and/or between 5 and 200 ppm magnesium ions (Mg^{2+}).

36. (New) A method for affixing mineral fillers on cellulose fibers in an aqueous suspension comprising providing a reaction medium of an aqueous suspension of cellulose fibers, said suspension being derived from a papermaking procedure and containing hydrogen carbonates, carbonates or silicates of alkali and/or earth alkali metals, and adding a hydroxide of a mineral filler to said reaction medium to precipitate carbonates or silicates of the mineral filler onto the fibers, and wherein the hydroxide of the mineral filler is a calcium hydroxide added in as a concentrated milk or in soluble form.

37. (New) Method as claimed in claim 36, wherein said milk comprises calcium hydroxide particles having a mean diameter of less than 6 microns.

38. (New) A manufacturing process for sheets of paper comprising

(a) providing a manufacturing composition based on water and on a bleached or unbleached chemical pulp of paper fibers, on a mechanical pulp, or on a thermomechanical pulp, or on a mixture thereof, said composition comprising at

least alkali metal and/or earth alkali metal ions, and
silicate or carbonate and hydrogen carbonate ions,

(b) adding to said composition a hydroxide of a
mineral filler to affix said mineral filler onto the paper
fibers, and

(c) forming a wet sheet of paper on a papermaking
machine from the paper fibers which were precipitate-loaded
in suspension and drying said sheet,

wherein the manufacturing composition includes sodium
and hydrogen carbonate ions in ionic equilibrium.

39. (New) A manufacturing process for sheets of paper
comprising

(a) providing a manufacturing composition based on
water and on a bleached or unbleached chemical pulp of paper
fibers, on a mechanical pulp, or on a thermomechanical pulp,
or on a mixture thereof, said composition comprising at
least alkali metal and/or earth alkali metal ions, and
silicate or carbonate and hydrogen carbonate ions,

(b) adding to said composition a hydroxide of a
mineral filler to affix said mineral filler onto the paper
fibers,

(c) forming a wet sheet of paper on a papermaking
machine from the paper fibers which were precipitate-loaded
in suspension and drying said sheet,

5639/USSN 10/049,505
Group Art Unit 1731

(d) recovering drip waters of stage (c) and injecting into the drip waters a gas-containing carbon dioxide to neutralize and stabilize the pH of said drip waters, and

(e) recycling the drip waters as processed in (d) into the manufacturing composition of (a),

wherein the manufacturing composition includes sodium and hydrogen carbonate ions in ionic equilibrium.